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ISO/IEC JTC 1 SC 25 -
INTERCONNECTION OF INFORMATION TECHNOLOGY EQUIPMENT

Gerd Weking, SC Chair

Dr. Walter von Pattay, SC Secretary

2012 JTC 1 Plenary

ISO JTC1 IEC
INFORMATION TECHNOLOGY STANDARDS

Membership and Participation

- Participants
  - 29 P-Members
  - 19 O-Members
  - Participation on SC 25 plenary meetings:
    - 2008 Lyon: 23 P-member
    - 2009 Beijing 21 P-member
    - 2010 Seattle 25 P-member
    - 2011 Melbourne 16 P-member
    - 2012 Geneva 20 P-member

Liaisons

- Liaisons within JTC 1/SC 6, 27, 32 & *39*
- Global ISO TC 205, ITU – T SG9, SG15, SG16, IEC TCs and SCs and ECMA.
- European SDOs: ETSI ATTM, CEN TC247, CENELEC TC205, TC215
- US SDOs: IEEE 802.3, Broadband Forum, UPnP Forum, GridWise Architecture Council, etc.

Sub-committee structure - Working Groups

- **WG 1 - Home electronic systems:**
  Electronic systems for the interaction and control of electrical and electronic devices in home and small business environments
- **WG 3 - Customer Premises Cabling:**
  Standardization of characteristics of cabling systems and associated infrastructure for customer premises including test procedures and planning and installation guides
- **WG 4 - Interconnection of Computer Systems and Attached Equipment:**
  Interfaces and protocols for the interconnection of computer systems and computer peripheral equipment as well as microprocessor systems
- **PTTT - Project Team Taxonomy and Terminology**

SC roots

- Nov 1987 IEC TC 83: Information technology equipment, founded 1980 with
  - WG 1: Home Electronic Systems, created1983
  - WG 2: Fibre Optic Connections for Local Area Networks, created1983
  - WG 3: Customer Premises Cabling, created1988
- joined as JTC 1/SC 83 with ISO TC 97: Information processing systems, and IEC SC 47B: microprocessor systems, (the later JTC 1 /SC 26) to form ISO/IEC JTC 1: Information technology (TC 47 had been founded 1960)
- Nov 1989 JTC 1/SC 83 & JTC 1/SC 13: Interconnection of equipment, joined to form: JTC 1/SC 25: Interconnection of information technology equipment (SC13 renamed SC25/WG 4).
- 1999 JTC 1/SC 26 closed and passed its projects to SC25/WG 4.

SC 25 Standards market leaders

- **Global use of ISO/IEC 11801: Generic cabling system**
  - **Worldwide office building are equipped with an infrastructure meeting this standard.**
  - **Worldwide the same mating interface is used to connect computers to networks.**
- **MBs from four continents confirmed recently the use of ISO/IEC 14543-3-x: Home Electronic System (HES) Architecture. Products meeting these standards are provided by at least the 250 suppliers that had products certified for being interoperabel.**
- **Every computer uses ISO/IEC/IEEE 60559 (the former IEC 559).**
- **ISO/IEC 14776-xxx: Small Computer System Interface & 1SO/IEC 14165-xxx: Fibre Channel are widely used in the industry (no data centre can exist without standards from SC 25)**

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SC 25 co-operates is a systems committee

- ISO/IEC 11801: Generic cabling system, *is a customer of component (cable & connector) committee and provides the infrastructure for many application committees: ITU, IEEE , IEC TC 100, … SC 25/WG 1 and WG 4.*
- Home electronic system (HES) standards interconnects products from different industries to a workable system, connects the grid outside the premises with the mini-grid inside.
- Interconnect standards provide computers and computer systems like data centers with basic functions

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Published Standards of SC 25

- SC 25/WG1: *Home Electronic System*
- *SC 25/WG 3: Cabling Standards*
- *SC 25/WG 4: Interconnection of Computer Systems and attached Equipment*
- *SC 25/PT TT:* Taxonomy and Terminology
- 253/258 Publications (ISO/IEC count)
- 38 projects in development
- *The column "total" on the following overhead includes documents coming via fast track procedures.*

Published Standards of SC 25

Published standards +TR / Pages										
	Total		WG 1		WG 3		WG 4		PT TT	
2008	86	**4**045	3	178	5	197	5	904	0	0
2009	7	458	2	63	1	6	4	389	0	0
2010	7	**1**333	0	0	3	60	4	**1**266	1	17
2011	40	**3**285	0	0	3	275	3	**1**697	0	0
2012	11	784	8	497	2	178	1	109	0	0

new work and opportunities

- Smart grids need smart partners in order to synchronise the usage of energy with its production (by wind, sun and tide).
- This requirement enhances the market for SC 25 standards on Smart Homes and Buildings already available and requires co-operation with standards bodies in charge of the public grids & and the interface between the grids on premises and outside,
- Due to the importance of non-electric energy for the CO_2 footprint of premises development of standards for smart homes and buildings need to also consider gas and tele-heating (production & usage).
- Energy efficiency is being enhanced by a number of projects for energy management, energy harvesting and prolongation of infrastructure lifetime that leads to a decrease of resources needed.
- SC 25 prepared a white paper in response to a request from the JTC 1 Management that explains to laymen the standards of WG 1 that are of importance to smart grids.

new work and opportunities

- The cabling standards are being reorganized to provide an easy to use basis for the support of new kinds of premises and future applications and technologies.
- The specification of channel performance by ISO/IEC 11801 provides applications with a reliable infrastructure implemented with material exposed the competition has proved to be so attractive to the market that it requires international standards also for application specific cabling subsystems based on the same principle.
- Copper is still expanding its field of application with 40/100 Gbit/s via twisted pair and twinax having started.
- Application specific cabling subsystems are added to the work program and started to be worked on.

new work and opportunities

- Development of interconnects:
  Fibre Channel, SCSI, RapidIO interconnect
  ATA7 (including SATA), the most commonly used storage interconnect in PCs, is continued and new interconnects are added as they come up.
- Storage Management is being addressed.
- Maintenance of former SC 26 .
  Microprocessor standards is being continued.

user engagement

- Participation
  - Participation of P-members on plenary meetings is adequate
  - Participation in WG meetings depend on the subject and vary between 5 and 60 experts from 3 to 25 countries (down to 3 at meetings)
  - Experts from component and system industry, engineering and consulting company's, measuring equipment manufacturer, test houses, academia, etc.
  - Liaisons members are active and contributing.
  - P-member voting participation is adequate.

known implementations

- Home Electronic Systems gaining attention also by governments with interest for carbon footprint. (In the confirmation process MBs from four continents reported use of 14543-3-x)
- The world market has accepted ISO/IEC 11801 as **the** standard for generic cabling, many countries provide nat. editions and its principles are being used for new standards.
- Some of the most widely used IT standards in the world are within the portfolio of SC 25.

2012Repeated experience

- When ever possible the normal procedure should be preferred to the fast track procedures. In the fast track procedure the effort for member bodies is about the same, while their findings often get lost.
- Thus the added value provided by input from MBs can not be harvested.

Focus and quality

While most standards activities in new, high technology areas might not be able to keep pace with companies and consortia, SC 25 has taken several steps to decrease the standard development risk and enhance the likeliness that the standards will be used in practice:

- Co-operation with both SDOs (Standards Developing Organizations) and consortia to make best use of input they can provide is being used widely and intensively.
- SC 25 is focusing most efforts on a limited number of important specifications and is seeking contributions from other SDOs where appropriate.
- The term IT widens its meaning, interrelated documents are developed by different committees with fairly high speed. This needs extra effort to avoid duplication of specifications, inconsistencies and mistakes

Development time: standard – Fast track procedure

- The fast track procedures introduce risks and very often also extra delay. The use of these procedures should be carefully considered on a case-by-case basis

Fast track documents (Examples)

- The ISO/IEC 14908 series for control systems in buildings approved by Fast Track and prepared for publication with considerable effort by SC 25 have been handed over to ISO TC 205 and then moved back to JTC 1, where approved by JTC 1 with the challenge of having two approved versions of the same specification. JTC 1/SC 6 now has to handle it. After 6 years the first parts are published.

Development time and quality: IEEE procedure

- One of the two proposals under the MOU with IEEE that had failed in the first attempt was resubmitted after being updated by IEEE and published last year after a positive vote in SC 25.
  Success after 31 months.
- The second project (IEEE Std 1394™-2008: High-Performance Serial Bus) is still being expected as IEEE considers the replacement of a reference to a US standard with a reference to the international standard with identical content as a technical change that has to go through the whole IEEE process. After 46 months no progress is seen.
- Meanwhile a document starting as NWIP took 13 months to IS.
- Even worse: the process can not harvest the benefit of international standardization and take into account Member Bodies' input.

2012

- date/location of next SC plenaries
  - 2013-10-04 / Stockholm / Kista
  - 2014-09-09 (tentatively date)

New directions 2011 plenary

- SC 25 unanimously endorses the nomination of Mr Gerd Weking as chairman of SC 25 for another term of office. Subject to JTC 1plenary 2012
- Scope is updated to better express SC 25's contribution to smart grids (electricity, gas, heat, water). Endorsed by JTC 1 ballot with two comments, one still to be resolved by SC 25.
- SC 25 established a liaison with SC 39 on standards for energy efficiency of data centres within the scope of JTC 1 and with respect to interconnection of IT equipment within the scope of SC 25.

2012 new directions - Geneva Plenary 2012-09-14

Resolution SC 25: 23/4

- SC 25 instructs its secretary to skip the FDIS stage only if a DIS has received 100 % approval without comments that are not purely editorial, subject to final approval by IEC CO. Otherwise he will seek the advice of WGs.

Resolution SC 25: 23/7

- SC 25 instructs its secretary to establish a Liaison with JTC 1/SC 39.

New directions 2011 still open

- SC 25 instructs its Secretary to request the IEC to investigate providing storage and access for software associated with standards so that these standards can reference the software rather than including the code in the published text of the standard.
- SC 25 instructs its Secretary to ask IEC to make the TR 29107 and TR 29108 available free of charge, since they are not specifications that stand on their own and support other standards that can be charged.

Thank you for your attention

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